LAW OFFICES
SMITHWICK & BELENDIUK, P.C.
1990 M STREET, N.W.
SUITE 510
WASHINGTON, D.C. 20036

TELECOPIER
(202) 785-2804

TELEPHONE
(202) 785-2800

June 4, 1992

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

Re: MM Docket No. 92-107
File No. BPED-900816MA
Bible Broadcasting Network, Inc.
Fort Smith, Arkansas

Dear Ms. Searcy:

Transmitted herewith, on behalf of Bible Broadcasting Network, Inc., applicant for a construction permit for a new noncommercial educational FM station at Fort Smith, Arkansas, are an original and six copies of a Petition for Leave to Amend and the accompanying amendment.

If there are any questions with respect to this matter, please communicate with the undersigned.

Sincerely,

Arthur V. Belendiuk
Counsel for
BIBLE BROADCASTING NETWORK, INC.

Enc.
AVB/lmv.A0604

Before the

Federal Communications Commission

Washington, D.C. 20554

In re Application of	)	MM Docket No. 92-107
BIBLE BROADCASTING NETWORK, INC. Channel 209A Fort Smith, Arkansas	)	File No. BPED-900816MA
NATIONAL CHRISTIAN NETWORK, INC. Channel 207C2 Fayetteville, Arkansas	)	File No. BPED-900823MA
For Construction Permit for a New Noncommercial Educational FM Station	)	

TO: The Honorable Walter C. Miller
Administrative Law Judge

PETITION FOR LEAVE TO AMEND

Bible Broadcasting Network, Inc. ("BBN"), applicant for a construction permit for a new noncommercial educational FM station at Fort Smith, Arkansas, by its attorney, hereby respectfully requests the Presiding Officer to grant it leave to amend its above-referenced application (File No. BPED-900816MA) as set forth herein. In support thereof, the following is shown:

BBN requests leave to amend its application as required by Hearing Designation Order, DA 92-558, released May 14, 1992. The attached amendment is a "Study Showing Compliance with Guidelines Concerning Human Exposure to Radiofrequency Radiation From FM Facility as Proposed" indicating that BBN's application will not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 C.F.R. §1.1307 of the Rules and

also indicating how workers on the tower would be protected from radiofrequency radiation.

Therefore, it is requested that the attached amendment be accepted.

WHEREFORE, good cause having been shown, it is respectfully requested that BBN's petition be granted and the subject amendment be accepted.

Respectfully submitted,

BIBLE BROADCASTING NETWORK, INC.

By: _____
Arthur V. Belendiuk
Gary S. Smithwick
Its Counsel

SMITHWICK & BELENDIUK, P.C.
1990 M Street, N.W.
Suite 510
Washington, DC 20036
(202) 785-2800

June 4, 1992

Before the

Federal Communications Commission

Washington, D.C. 20554

In re Application of	)	
	)	
BIBLE BROADCASTING NETWORK, INC.	)	File No. BPED-900816MA
	)	
	)	
For Construction Permit for a New Noncommercial Educational FM Station on Channel 209A, Fort Smith, Arkansas	)	

AMENDMENT

Bible Broadcasting Network, Inc. ("BBN"), applicant for a construction permit for a new noncommercial educational FM station at Fort Smith, Arkansas (File No. BPED-900816MA), hereby amends its above-captioned application by submission of the attached "Study Showing Compliance with Guidelines Concerning Human Exposure to Radiofrequency Radiation From FM Facility as Proposed." This amendment is filed pursuant to Hearing Designation Order, DA 92-558, released May 14, 1992.

Executed this 29, day of May, 1992.

BIBLE BROADCASTING NETWORK, INC.

By: _____
Lowell Davey
President

AMENDMENT TO APPLICATION

SUPPLEMENTAL AMENDMENT TO APPLICATION FOR A NEW FM STATION AT FT. SMITH, AR. FILE NO. BPED-900816MA

E. HAROLD MUNN, JR. & ASSOCIATES, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036

CERTIFICATION OF CONSULTANT

The firm of E. Harold Munn, Jr. & Associates, Inc., Broadcast Engineering Consultants, with offices at 100 Airport Drive, Coldwater, Michigan, has been retained for the purpose of preparing the technical data forming this report.

The report has been prepared by properly trained electronics specialists under the direction of the undersigned whose qualifications are a matter of record before the Federal Communications Commission.

I declare under penalty of perjury that the contents of this report are true and accurate to the best of my knowledge and belief.

E. HAROLD MUNN, JR. & ASSOCIATES, INC.

May 15, 1992

By _____
E. Harold Munn, Jr., President

100 Airport Drive, Box 220
Coldwater, Michigan 49036

(517) 278-7339

DISCUSSION

This firm was retained to prepare this amendment which is responsive to the requirement of the Hearing Designation Order in MM Docket No. 92-107. This report contains updated information relative to the protection of workers from RF radiation exposure.

The following substitution is to be made in the Engineering Report now on file in Application File No. BPED-900816MA requesting a construction permit for a new FM-ED station at Ft. Smith, AR:

1. Substitute Exhibit E-8, Pages 1 through 7, for the Exhibit E-8 materials now on file. It is noted that the potential impact of the LPTV stations on an adjacent structure has been fully considered.

Include as an additional Exhibit the single page entitled EXHIBIT E-8A which commits to power reduction or cessation of operation when a person or persons are working in the area of or on the tower. It is understood that this includes persons working on or about the immediately adjacent structure as well.

The Engineering Report as amended complies with the requirements of the Rules and FCC Form 301, Section V-B.

STUDY SHOWING COMPLIANCE WITH GUIDELINES CONCERNING HUMAN EXPOSURE TO RADIOFREQUENCY RADIATION FROM FM FACILITY AS PROPOSED

This proposal to add an Educational FM antenna to an existing tower structure has been evaluated for compliance with FCC guidelines concerning human exposure to radiofrequency radiation, as detailed in OST Bulletin No. 65, October, 1985.

There are no other FM Broadcast or AM Broadcast facilities in proximity to the transmitter site proposed in this application which would require study under this section. The tower proposed for use by the FM station supports various land mobile stations, which are excluded from the studies.

However, on an adjacent tower, there are three (3) Low Power Television stations (LPTV) existing or authorized. Therefore, this proposal has been studied, assuming all three of the LPTV stations to be operating. The data obtained shows that the combined station fields are below the ANSI guidelines for permitted field exposure.

The field from each station has been calculated, and the decimal fraction of the ANSI limit contributed by each station determined. The sum was then taken for the decimal fractions of the limit. The total is less than unity, therefore there is full compliance with the rules.

STATION	FIELD	LIMIT	FRACTION
K27DI	0.0058 mW/cm^2	1.9 mW/cm^2	0.003
K46BZ	0.0023	2.2	0.001
K63EG	0.0032	2.4	0.0013
Prop.FM Ch209	0.0044	1.0	0.0044
		Sum:	0.0097

METHODOLOGY FOR FM RADIATION STUDY

The EPA has developed a computer model which serves as a general means of estimating the power densities in the vicinity of typical FM broadcast stations. As is typical of such models, this frequently results in a "worst case" type of determination, as contrasted with lesser amounts of radiation which may actually be determined to exist by taking of field strength measurements. The EPA model considers the following variable factors:

(1) Effective radiated power
(2) Radiation center height above ground
(3) Polarization of the transmitted signal
(4) Type of antenna (generic)
(5) Number of sections (elements or bays) in the array

This particular model is discussed by Gailey and Tell in EPA Report No. 520/6-85-011, April, 1985.

This model makes use of the element and array pattern product and takes into account ground reflections. It is considered to be a reasonable approach for determining the upper bounds of field intensity near transmitting towers on which FM facilities are located.

Calculations are normally made at 2 meters above the ground. Total ERP is used--adding of the vertical and horizontal components. The FCC's OST Report No. 65 provides tables listing the estimates of antenna heights required for compliance with "worst case" situations. (See Table 1.) Reasonable predictions may be made from use of those data. More specific calculations are made by computer, extrapolating the basic data, and providing a printout graphical presentation of the data.

In the case of joint use of a site by TV and FM stations, the fractional contributions are summed. If the sum of all such fractional contributions is less than unity (1.0), it is concluded that there is no problem of exceeding the ANSI guidelines.

References:

1. P. C. Gailey & R. A. Tell. "An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services," U. S. Environmental Protection Agency, April, 1985.

2. Federal Communications Commission, OST Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Evaluating Human Exposure to Radiofrequency Radiation," by Robert F. Cleveland, October, 1985.

3. Kraus, J. D. "Antennas," McGraw-Edison Book Co., NYC, 1950

METHODOLOGY FOR TV RADIATION STUDY

The EPA has developed a computer model which serves as a general means of estimating the power densities in the vicinity of typical TV broadcast stations. As is typical of such models, this frequently results in a "worst case" type of determination, as contrasted with lesser amounts of radiation which may actually be determined to exist by taking of field strength measurements. The EPA model considers the following variable factors:

(1) Effective radiated power
(2) Radiation center height above ground
(3) Polarization of the transmitted signal
(4) Type of antenna (generic)
(5) Number of sections (elements or bays) in the array

This particular model is discussed by Gailey and Tell in EPA Report No. 520/6-85-011, April, 1985.

This model makes use of the element and array pattern product and takes into account ground reflections. It is considered to be a reasonable approach for determining the upper bounds of field intensity near transmitting towers on which TV facilities are located.

Calculations are normally made at 2 meters above the ground. Total ERP is used--adding of the vertical and horizontal components. The FCC's OST Report No. 65 provides tables listing the estimates of antenna heights required for compliance with "worst case" situations. (See Table 1-4) Reasonable predictions may be made from use of those data. More specific calculations are made by computer, extrapolating the basic data, and providing a printout graphical presentation of the data.

In the case of joint use of a site by TV and FM stations, the fractional contributions are summed. If the sum of all such fractional contributions is less than unity (1.0), it is concluded that there is no problem of exceeding the ANSI guidelines.

References:

1. P. C. Gailey & R. A. Tell. "An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services," U. S. Environmental Protection Agency, April, 1985.

2. Federal Communications Commission, OST Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Evaluating Human Exposure to Radiofrequency Radiation," by Robert F. Cleveland, October, 1985.

3. Kraus, J. D. "Antennas," McGraw-Edison Book Co., NYC, 1950

Station: BBN Frequency: 89.700 MHz Height of Observer (ARP): 2.0 Meters

	No. of Elements	Element Type	Height of Center (ARP)	Power (ERPd)
Horizontal Polarization:	3	EPA TYPE 3	41.0 m	1.000 kW
Vertical Polarization:	3	EPA TYPE 3	41.0 m	1.000 kW

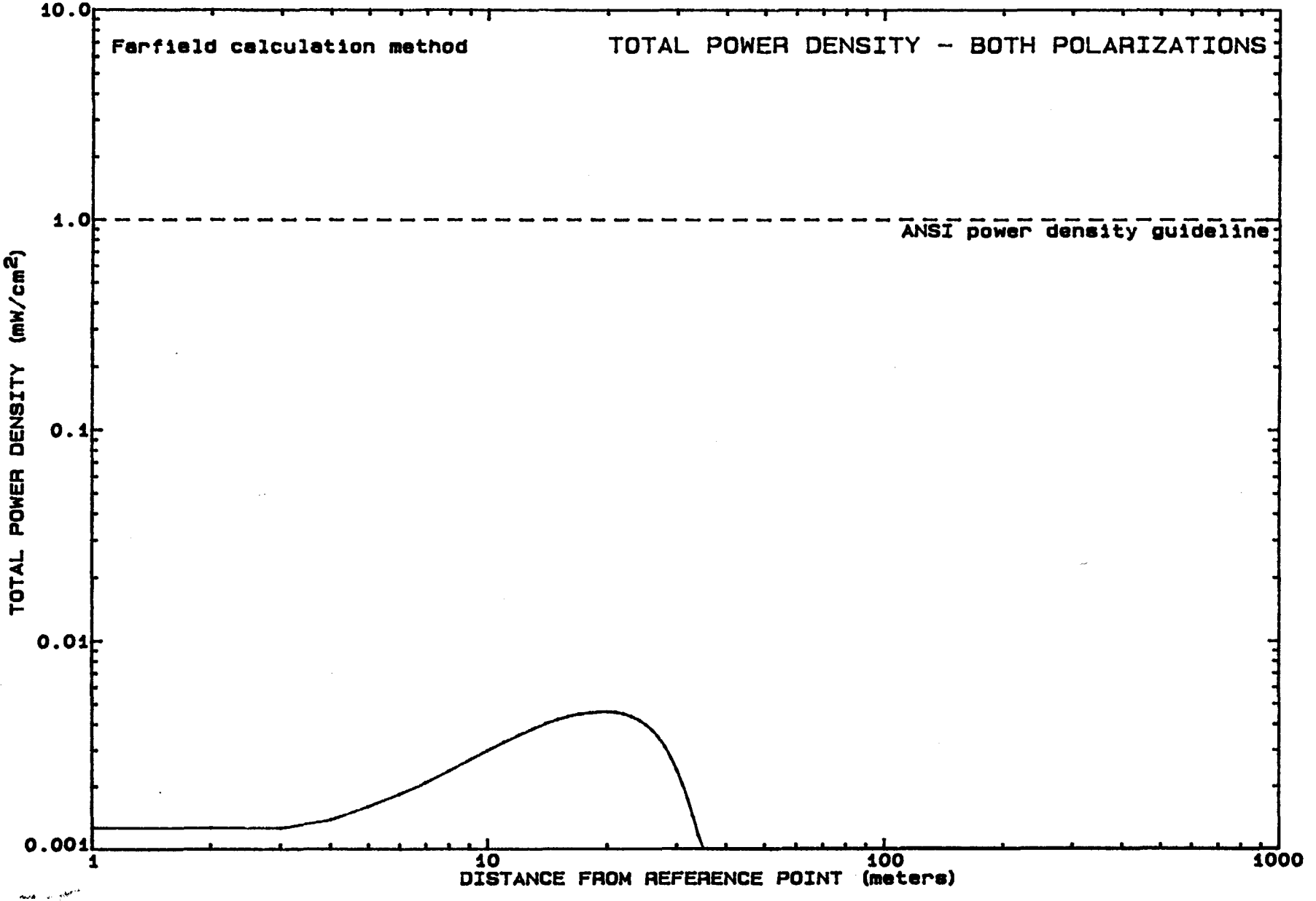
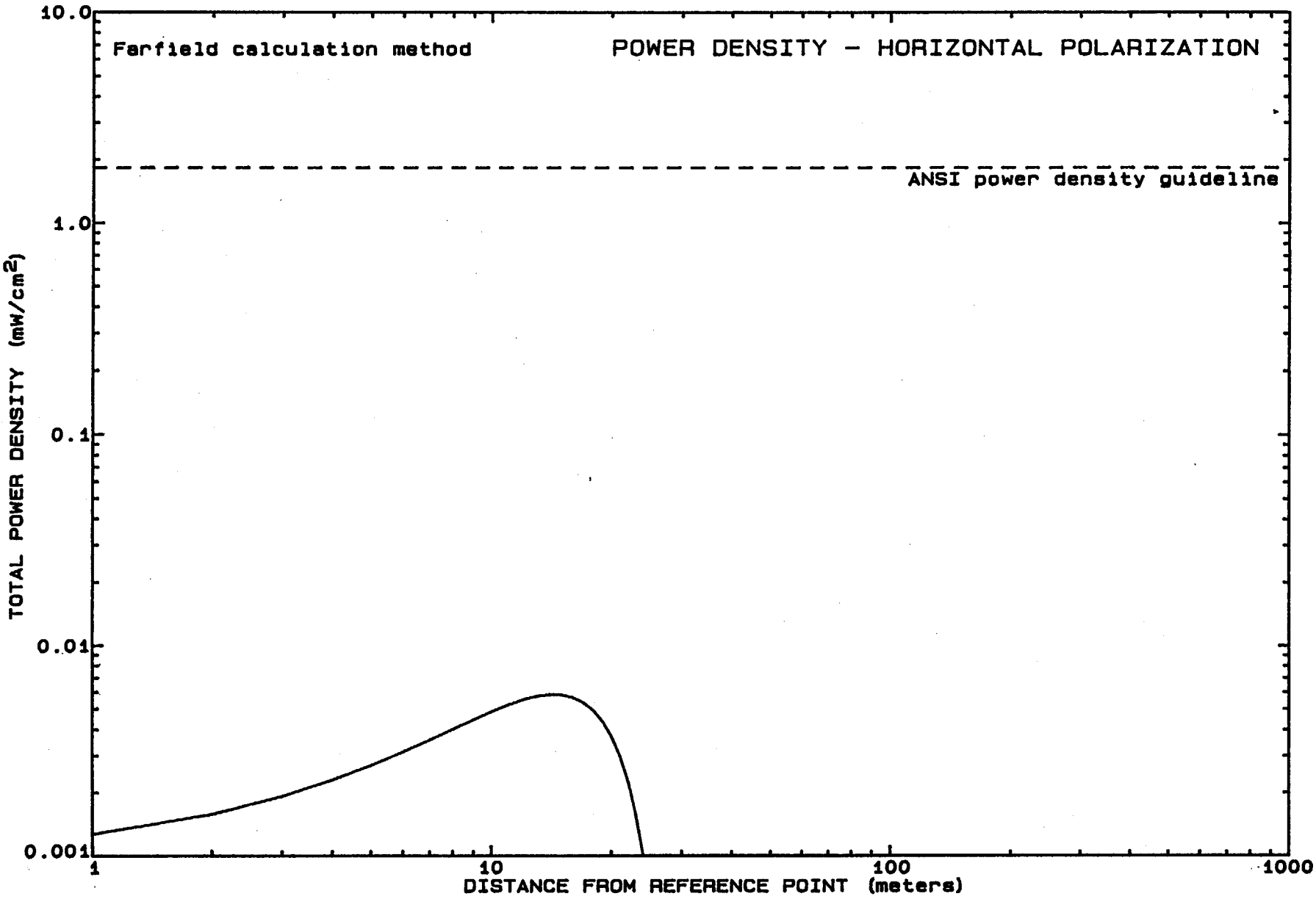


EXHIBIT E-8

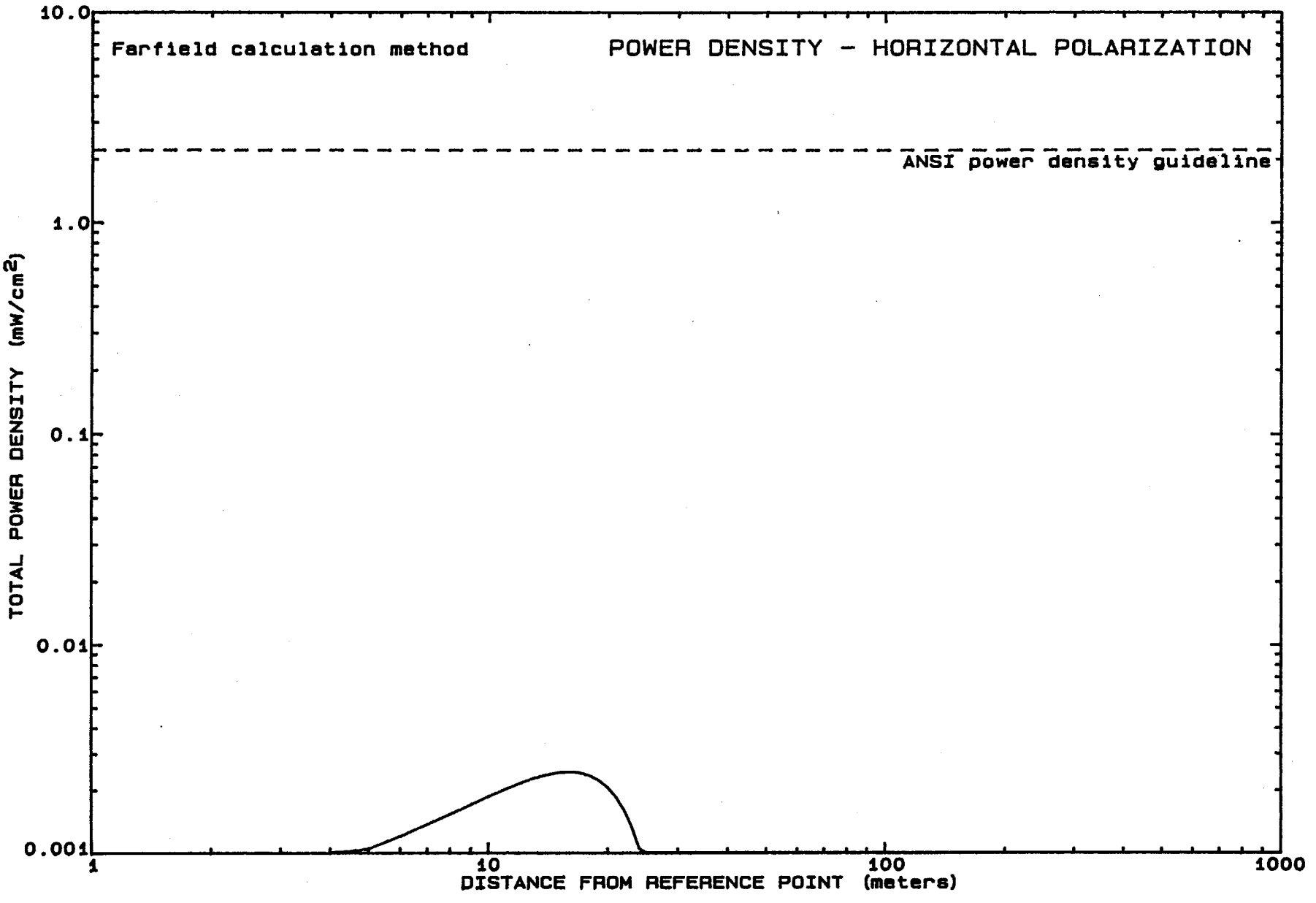
Station: K27DI Frequency: 549.260 MHz Height of Observer (AAP): 2.0 Meters

	No. of Elements	Element Type	Height of Center (AAP)	Power (ERPd)
Horizontal Polarization:	16	UHF ELEMENT	76.0 m	40.400 kW



Station: K46BZ Frequency: 663.260 MHz Height of Observer (ARP): 2.0 Meters

	No. of Elements	Element Type	Height of Center (ARP)	Power (ERPd)
Horizontal Polarization:	16	UHF ELEMENT	84.0 m	20.800 kW



Station: K63EG Frequency: 765.250 MHz Height of Observer (ARP): 2.0 Meters

	No. of Elements	Element Type	Height of Center (ARP)	Power (ERPd)
Horizontal Polarization:	16	UHF ELEMENT	64.0 m	16.900 kW

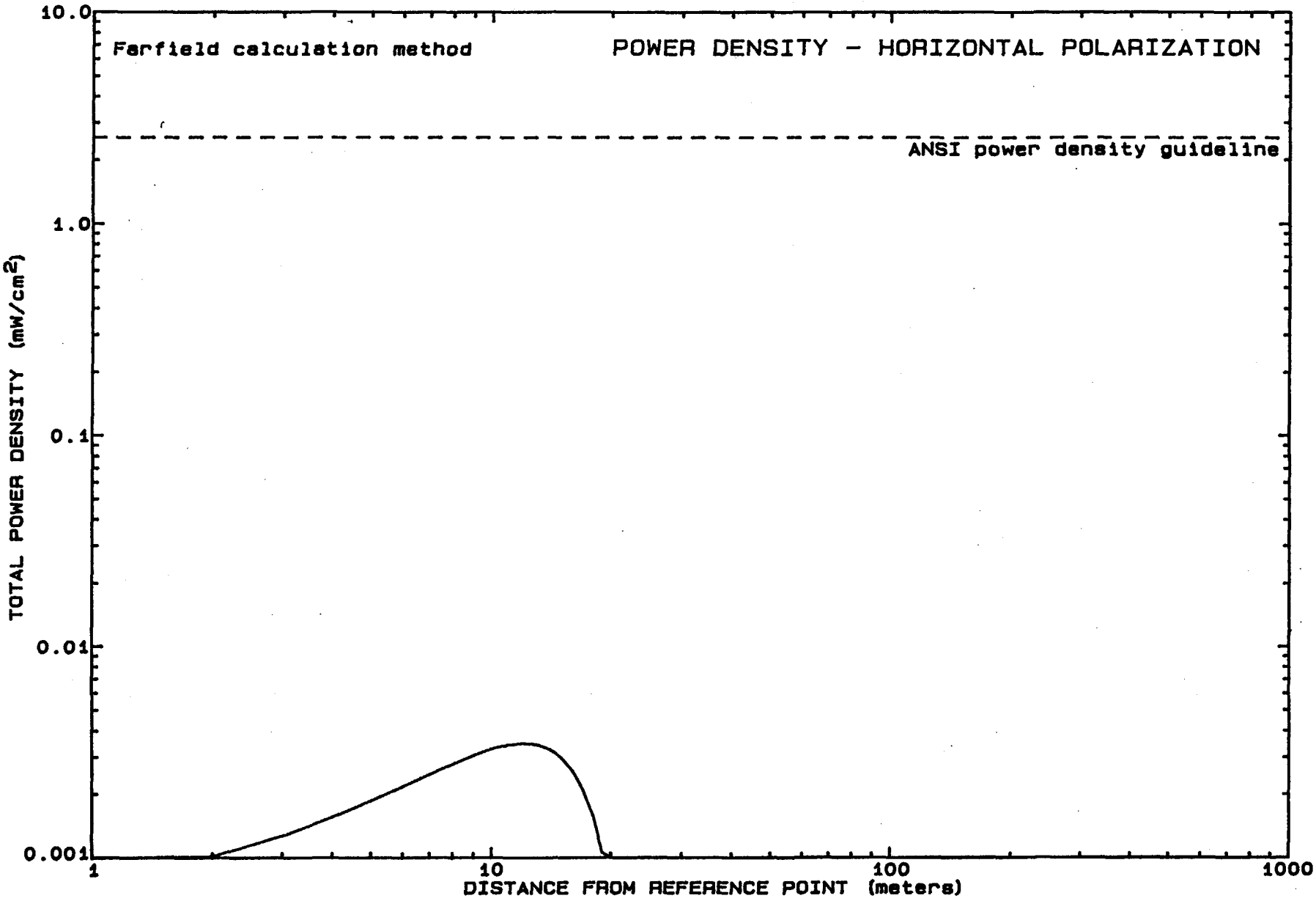


EXHIBIT E-8A

The FM Broadcast facility proposed in the referenced application will not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in Section 1.1307(b) of the Commission's rules.

RADIATION PROTECTION: This proposal has been evaluated for compliance with FCC guidelines concerning human exposure to radio-frequency radiation. The standards employed are detailed in OST Bulletin No. 65, October, 1985.

Table 1 of Appendix B was employed for the initial study concerning FM broadcast radiation protection.

For the effective radiated power and type of antenna proposed, the minimum antenna radiation center above ground is specified as about 8.2 meters. This application proposes an antenna height above ground of at least 41 meters. Therefore, full compliance with the guidelines is attained by the instant application.

In addition to the protection afforded by the proposed antenna height above ground, the facility will be properly marked with signs, and entry to the facility will be restricted by means of locked gates.

In the event work would be required in proximity to the antenna, or on the tower structure, such that the person or persons working in the area or on the tower would be potentially exposed to fields in excess of the ANSI guidelines, the FM facility will reduce power, or cease operation during the critical period.

CERTIFICATE OF SERVICE

I, Lisa M. Volpe, a legal assistant in the law firm of Smithwick, & Belendiuk, P.C., certify that on this 4th day of June 1992, copies of the foregoing were mailed, postage prepaid, to the following:

Hon. Walter C. Miller*
Administrative Law Judge
FCC, Rm 213
2000 L Street, N.W.
Washington, DC 20554

Paulette Laden, Esquire*
Hearing Branch, Enforcement
Division Mass Media Bureau
FCC, 2025 M St., NW.
Suite 7212
Washington, DC 20554

Chief, Data Management Staff*
Audio Services Division
Mass Media Bureau, FCC
1919 M St., N.W. Rm 350
Washington, DC 20554

Chief, Audio Services
Division*
Mass Media Bureau, FCC
1919 M St.,N.W., Rm 302
Washington, DC 20554

Raymond A. Kassis
President
National Christian
Network, Inc.
1150 W. King Street
Cocoa, FL 32922

*By hand

Lisa M. Volpe